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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,578

08/18/2003

Nicholas Leventis

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3949

21186

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07/16/2008

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EXAMINER

COONEY, JOHN M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

07/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/643,578	Applicant(s) LEVENTIS ET AL.	
	Examiner John Cooney	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-23, 25-31, 36-64, 66, 67 and 69-71 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 7-22, 43-46, 50-64, 66 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23, 25, 36-42, 47-49 and 69-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed 3-28-08 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 23, 25-31, 36-42, 47-49, 69, 70, and 71 are rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' amendment inserting "connecting surface active groups of the metal oxide or silicon oxide based sol-gel material" into the claims lacks support in the originally filed supporting disclosure. There is no reference to surface active groups in the supporting disclosure, including the parts indicated in applicants' response, and "connecting surface active groups" is not seen to be equivalent to the disclosure at page 10 line 30 – page 11 line 4 of applicants' originally filed supporting disclosure. This is a new matter rejection.

Claims 26-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' originally filed supporting disclosure does not provide support for the ranges of amount values as claimed. It is not evident that the ranges of weight percent values now claimed are supported by the originally filed supporting disclosure for the products that are now claimed. The original claims are the part of the originally filed supporting disclosure that provide the ranges of values now set forth by the claims. However, these ranges of values do not pertain to the compositions now claimed, and the disclosure of original claims 25-31 are not seen to provide support for the ranges of values for the compositions now claimed. This is a new matter rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 25, 36, 39-42, 47-49, 69, 70, and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Novak et al.(Chem Mater. document).

Novak et al. disclose preparations of crosslinked aerogels prepared by forming a sol-gel material as defined by applicants' claims, solvent to form a wet-gel film followed

by drying through supercritical and sub-critical drying processes as defined by applicants' claims, which read on the products and processes of applicants' claims (see abstract, page 282 column 2, page 283 & 284, and page 285 column 1, as well as, the entire document).

Applicants' arguments have been considered. However, rejection is maintained. Applicants' arguments bridging pages 11 and 12 of their response do not identify differences over Novak et al. which are supported by corresponding limitations in the claims. Claim 39 generally states resistance to rupture under load without specific degrees of rupture resistance. However, such a degree of rupture resistance is held to be inherent to the preparations of Novak et al. which do provide for organic crosslinking.

As to applicants' arguments regarding organic crosslinking, it is maintained that page 285 column 1 does provide for organic crosslinkers. Though Novak et al. notes that they were "unsuccessful at forming high-quality products" does not negate that products were obtained and are disclosed, and, accordingly, anticipated. Further, the disclosure of a composition of matter in a reference may be anticipatory even though the reference indicates that the composition is not preferred or even that it is unsatisfactory for the intended purpose. In re Nehrenberg 126 USPQ 383.

Claims 23, 25, 36-42, 47-49, 69, 70, and 71 are rejected under 35 U.S.C. 102(a) as being anticipated by Yim et al. (Korean J. Chem. Eng. document).

Yim et al. disclose preparations of polyisocyanate crosslinked aerogels prepared by forming a sol-gel material as defined by applicants' claims, solvent to form a wet-gel film followed by drying through supercritical and sub-critical drying processes as defined by applicants' claims, which read on the products and processes of applicants' claims (see abstract, pages 159-162, and page 165 column 2, as well as, the entire document). As to claim 39 which generally states resistance to rupture under load without specific degrees of rupture resistance, it is held that such a degree of rupture resistance is inherent to the preparations of Yim et al. which do provide for organic crosslinking.

Applicants' arguments have been considered. However, rejection is maintained. Applicants' arguments bridging pages 13 and 14 of their response do not identify differences over Yim et al. which are supported by corresponding limitations in the claims. Applicants' arguments concerning the time that it takes to form the products of Yim et al. compared with applicants' are unpersuasive because they are not reflected by limitation in the claims. Applicants' arguments concerning flexibility of their structures not met by the structures of Yim et al. are unpersuasive because they are not reflected by limitation in the claims.

Further, it is maintained that applicants' claims do not require exclusion of and/or distinguish over the isocyanate materials disclosed by Yim et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yim et al. (Korean J. Chem. Eng. document).

Yim et al. disclose preparations of polyisocyanate crosslinked aerogels prepared by forming a sol-gel material as defined by applicants' claims, solvent to form a wet-gel film followed by drying through supercritical and sub-critical drying processes as defined by applicants' claims (see abstract, pages 159-162, page 161 column 2 and page 165 column 2, as well as, the entire document).

Yim et al. differs from applicants' claims in that it does not specifically specify amounts of its polyisocyanate group containing crosslinking component that are used in their preparations. However, normally, changes in result effective variables are not patentable where the difference involved is one of degree, not of kind; experimentation to find *workable* conditions generally involves no more than the application of routine skill in the art of chemical engineering. *In re Aller* 105 USPQ 233. Similarly, the determination of *optimal* values within a disclosed range is generally considered obvious. *In re Boesch* 205 USPQ 215. Accordingly, it would have been obvious for one having ordinary skill in the art to have varied the amounts of the crosslinking component of Yim et al. in the preparations of Yim et al. for the purpose of adequately performing

its hybrid article forming effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novak et al. (Chem Mater. document).

Novak et al. disclose preparations of crosslinked aerogels prepared by forming a sol-gel material as defined by applicants' claims, solvent to form a wet-gel film followed by drying through supercritical and sub-critical drying processes as defined by applicants' claims (see abstract, page 282 column 2, page 283 & 284, and page 285 column 1, as well as, the entire document).

Novak et al. differs from applicants' claims in that it does not specifically specify amounts of its crosslinking component that are used in their preparations. However, it is maintained that Novak et al. (page 285 column 1) does provide for organic crosslinking, and, normally, changes in result effective variables are not patentable where the difference involved is one of degree, not of kind; experimentation to find *workable* conditions generally involves no more than the application of routine skill in the art of chemical engineering. *In re Aller* 105 USPQ 233. Similarly, the determination of *optimal* values within a disclosed range is generally considered obvious. *In re Boesch* 205 USPQ 215. Accordingly, it would have been obvious for one having ordinary skill in the art to have varied the amounts of the crosslinking component of Novak et al. in the

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preparations of Novak et al. for the purpose of adequately performing its crosslinked article forming effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/

Primary Examiner, Art Unit 1796

<div>Application Number</div> <div></div>	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/643,578	LEVENTIS ET AL.	
	Examiner	Art Unit	
	John Cooney	1796	